

Notice of Allowability

Application No.

10/049,793

Examiner

Kandasamy Thangavelu

Applicant(s)

HAYASHI ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 20, 2006.
2. ☒ The allowed claim(s) is/are 1-7,9 and 10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Clean copy of allowed claims.

DETAILED ACTION

Introduction

1. This communication is in response to the Applicants' communication dated September 20, 2006. Claims 1, 4, 14-17 and 19 were amended. Claims 1-7, 9-17 and 19-20 of the application are pending.

Drawings

2. The corrected drawing submitted by the applicant on September 20, 2006 are accepted.

Examiner's Amendment

3. Authorization for this examiner's amendment was given in a telephone interview with Ms. Brenda O. Holmes on October 31, 2006 and Mr. Eugene Joswick on November 6, 2006.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

4. The application has been amended as follows:

Art Unit: 2123

In the Specification:

In Page 1, Line 16, "real-time spread"

has been changed to

-- real-time speed --.

In Page 3, Lines 7-8, "for receiving and displaying units of information through the communication network"

has been changed to

-- for receiving units of information through the communication network and displaying at the display terminal--.

In Page 4, Line 4, "information delivering server"

has been changed to

-- information provider server --.

In Page 11, Line 8, "The information provision management"

has been changed to

-- The property provision management --.

In the amendment of September 20, 2006, on Page 4, correction paragraph beginning on page 18, Line 17: Last line in that paragraph, "content generation server 2"

has been changed to

Art Unit: 2123

-- content generation terminal 2--.

In Page 21, Lines 15-19, "the skinning data calculation unit ... three-dimensional content"

has been changed to

-- skinning data calculation unit 55b performs rendering by calculating a profile of the skin component based on coordinates of said bone component when reproducing the three-dimensional content --.

In Page 21, Line 21, "the weighting factors"

has been changed to

-- the data --.

In Page 24, replace Lines 27-28 with

-- Fig. 20 shows screen of a content generation terminal. --.

5. In the claims:

Replace claim 1 with:

1. An information delivering system for delivering information through a communication network, said information delivering system comprising:

Art Unit: 2123

a content generation means for generating three-dimensional content for presentation;
an information delivering server configured to deliver said three-dimensional content to
a client terminal; and
said client terminal configured to receive and display said three-dimensional content,
wherein said client terminal includes a content receiving means, a skinning data calculation
means and a reproduction means;
wherein said three-dimensional content is generated by said content generation means by
creating a three-dimensional virtual space as projected onto a plane and arranging objects
indicative of said information within said three-dimensional space,
said content generation means generates said three-dimensional content separately as a
skin component which deforms with motion and a bone component which does not deform with
motion,
said information delivering server transmits an initial skin component and an initial bone
component and a subsequent bone component to said content receiving means,
said skinning data calculation means determines a subsequent skin component based on
the subsequent bone component; and
said reproduction means renders said three-dimensional content by rendering said initial
skin component and said initial bone component and said subsequent skin component and said
subsequent bone component.

In Claim 5, Delete Lines 3-4;

Art Unit: 2123

Claims 11-20 cancelled.

A clean copy of allowed claims is attached.

Reasons for Allowance

6. Claims 1-7 and 9-10 of the application are allowed over prior art of record.

7. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

The closest prior art of record shows:

(1) systems and methods for providing interactive displays of complex virtual environments by generating virtual reality files from a 3D model of the complex environment; the files may include octree and collision detection information that is used to simulate and render frames of complex environment; during simulation moving objects may be evaluated to detect collision with other objects; during rendering, objects may be dynamically tessellated during run time operations to actively control their appearance when displayed to a user; providing interactive displays of virtual environments to one or more users through a network environment; the client stations receive the simulation results from the server over the network; user input from the client station is used by the server to perform simulation operations (Hubrecht et al., U. S. Patent Application 2003/0117402);

(2) a method of approximating motion of a user using a three-dimensional model to approximate a user, tracking the motion of the user and positioning a three-dimensional model to approximate the motion of the user; the 3D model includes a virtual skeleton, comprised of bones arranged in a hierarchical tree structure; positioning the three-dimensional model includes adjusting the position of at least one of the bones; surrounding the bones are polygons representing the skin of the 3D model; movement of the polygons is tied to the movement of the bones, so the 3D model approximates real-life movement when the bones are repositioned; the bones may change location in response to an applied force, but do not change shape; the movement information includes displacement of the start of the bone from the end of its parent bone, the orientation of the bone relative to the orientation of its parent bone, one or more scale factors and a time of movement; approximating the motion of a user using a bones based 3D model (**Marshall et al.**, U. S. Patent Application 2003/0020718); and

(3) a communication system for performing a remote conversation with an actual or fictionalized human virtualized by using a computer comprising a client and a server, wherein the client includes an input portion for inputting a first message from a user, a transmitting portion for transmitting the first message, a receiving portion for receiving facial animation of the human and a second message that is sent from the human to the user as a response to the first message, an output portion for outputting the second message to the user and a display portion for displaying the facial animation; generally a skin model is used as a three-dimensional model; muscle and skeleton may be added to the skin model to generate a three-dimensional model; in the three dimensional model with the muscle and the skeleton, motion of a person can be

Art Unit: 2123

expressed more realistically by manipulating the construction points or the control points in the muscle or the skeleton (**Kamimura et al.**, U. S. Patent Application 2001/0051535).

Additional state of the art reviewed and considered by the Examiner is found in Blackwell et al., "Reconstruction of massive defects in the head and neck: the role of simultaneous distant and regional flaps", John Wiley & Sons, Inc, 1997.

None of these references taken either alone or in combination with the prior art of record discloses an information delivering system for delivering information through a communication network, specifically including:

(Claim 1) "said content generation means generates said three-dimensional content separately as a skin component which deforms with motion and a bone component which does not deform with motion,

said information delivering server transmits an initial skin component and an initial bone component and a subsequent bone component to said content receiving means,

said skinning data calculation means determines a subsequent skin component based on the subsequent bone component; and

said reproduction means renders said three-dimensional content by rendering said initial skin component and said initial bone component and said subsequent skin component and said subsequent bone component".

Art Unit: 2123

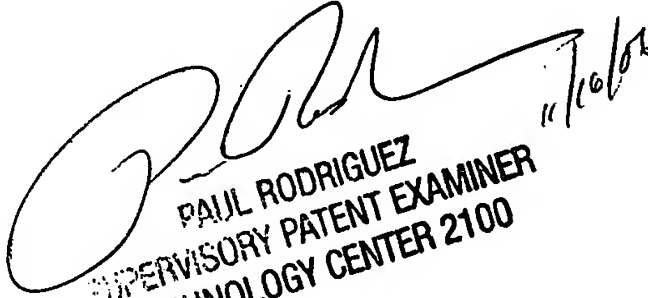
8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez, can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

K. Thangavelu
Art Unit 2123
November 6, 2006


PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
11/16/06